RECOGNITION OF GEOGRAPHIC VARIATION IN NOMENCLATURE.[1]

BY LEVERETT MILLS LOOMIS.

IT SEEMS inborn in the human mind to desire to know the names of objects, and if the objects are new, new names are invented. When the South Atlantic States were settled back in 1600, the English colonists named our Robin after its English namesake — in their eyes, longing for the familiar things of England, the Robin of the New World was the Robin of their old home. But in the Mockingbird they found no European counterpart; they could give it no onamatopoetic name, for it had the notes of all birds, so they called it the Mocking Bird. A quaint old writer, who has hidden his identity under the initials 'T. A.,' and whose tract is one of the rarest in the long list of Americana, in writing of the birds of Carolina, says: "Birds the Country yields of differing kinds and Colours .... For Pleasure, the .... blew bird, which wantonly imitates the various Notes and sounds of such Birds and Beasts which it hears, wherefore, by way of Allusion, it 's call'd the Mocking Bird; for which pleasing Property it 's there esteem'd a Rarity."

Later came Mark Catesby, the ornithologist, and proceeded to give a new name, for the trick that ornithologists have of giving new names to familiar birds, is an old trick, as old as the trade of ornithology. This new name for the Mockingbird, which appeared in Catesby's sumptuous folio, 'The Natural History of Carolina, Florida, and the Bahama Islands,' was *Turdus minor cinereo-albus non maculatus.*

Turdus minor cinereo-albus non maculatus, however, was not to be lasting; a master mind came into the world, an iconoclast. This image-breaker was Linnæus, who had genius for system — his 'Systema Naturæ' reduced ornithology to system. The Mockingbird, still the sweet singer of the Southland, is given a new

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name, *Turdus polyglottos; Turdus* the name of the genus and *polyglottos* the name of the species.

Along the way cut out by Linnæus numerous bird students traveled. Boie in 1826 took the Mockingbird out of the genus *Turdus* and put it in a genus of his own, giving the genus the name *Mimus*, the species name remaining as *polyglottus*; the whole name of the Mockingbird thus rehabilitated was *Mimus polyglottus*. In 1827, Swainson likewise instituted a new genus for the Mockingbird, styling it *Orpheus*.

Vigors, in 1839, in working up the birds obtained by the ship 'Blossom' in her voyage along the Pacific Coast gave the Mockingbird the specific name *leucopterus*, coupling it with the generic name *Orpheus*, for he supposed he had discovered a new species of Mockingbird.

In 1858, Professor Baird thought possibly he had found a long-tailed Mockingbird in California, and tentatively named it *Mimus caudatus*. In 1865, Dr. Coues called the Mockingbird of Arizona *Mimus polyglottus*, var. *caudatus*.

The last author, Dr. Mearns, to deal with the Mockingbird, tells us in 'The Auk' for January, 1902, that there are two kinds of Mockingbirds in the United States; namely, *Mimus polyglottos polyglottos*, *Mimus polyglottos leucopterus*. I fear it will be said that ornithologists have advanced backward from the binomial *Mimus polyglottus* of Boie toward the *Turdus minor cinereo-albus non maculatus* of Catesby.

With partial knowledge of geographic variation, came departure from the binomial system. *Mimus caudatus* of Baird was found to intergrade with the eastern bird and was reduced to *Mimus polyglottus*, var. *caudatus*. Later the leading American ornithologists agreed to leave out the abbreviation var., and have the pure trinomial, as in *Mimus polyglottos leucopterus*. With this change, the term subspecies came into vogue, supplanting the word variety. Then followed a period when great series were accumulated, and subspecies multiplied, and now a large part of the United States birds bear trinomials — even Catesby is outdone, for he called the Cardinal by the binomial, *Coccothraustes ruber*, while in the last systematic work on American birds the Cardinal has this cognomen, *Cardinalis cardinalis cardinalis* — in short, *cardinalis* three times, and out.

The study of specimens has made known geographic variation, as such study has made known individual variation and variation in sex, age, and season. Systematic ornithologists have groped their way into the light; of the sixteen variants, bearing trinomials, among California 'swimming birds,' fifteen were first described as species.

The Song Sparrow from Petaluma, California, originally designated *Ammodromus samuelis*, has become a sort of classic illustration of the way the facts of geographic variation have dawned upon the minds of systematic ornithologists.

Variation in sex and season in like manner has added to the darkness; for example, the male and female of Williamson's Sapsucker have been placed in different genera, and the winter and summer plumages of the Marbled Murrelet have each been described as distinct species.

Nomenclature has been a means in gaining knowledge of variation. In seasonal and sexual variation it has proved a temporary structure. Is this not also true in geographic variation? Is not nomenclature (binomial or trinomial) in geographic variation a scaffolding to be torn down rather than the edifice that is to abide?

Granting all that is unfolded in the most elastic theories of evolution concerning incipient species — it matters not whether they hail from islands where geographic variation breaks down in individual variation, or whether they be the artificially selected sections from regions where the arid passes into the humid — we are still confronted with the question: Is the science of ornithology to be advanced or retarded by continuing the recognition of geographic variation in nomenclature?

A glance at later American works on ornithology, containing life-histories as well as the systematic aspects of the subject, reveals that variants are often treated in the same manner as full-fledged species; both are given a vernacular name, description, habitat, and biography. For example, the variant of the Murre occurring on the Pacific is placed on the same footing, in this respect, as the Tufted Puffin, notwithstanding the hiatus that separates the Tufted Puffin from all other birds; the Tufted Puffin represents complete isolation of a form, the variant of the Murre variation within the bounds of such an isolated form. Whatever

future possibilities there may be in evolution, the Tufted Puffin and the variant of the Murre are not now of the same rank. We are to work out the questions of bird life of to-day, not those of ten thousand years hence. In spite of our boasted advance, we treat variants under trinomials in the same manner Professor Baird treated them in 1858 under binomials, fulfilling the adage that "extremes always meet."

If we deal with the food of birds, we find it convenient to ignore variants; the intermediates might be the only individuals with full stomachs. Thus it happens, that Dr. Judd has lumped all the Loggerheads in dealing with the food of our Shrikes.[1] Turn in what direction we will in the study of birds upon the basis of subspecies, intermediates bar the way.

Systematic ornithologists have been forced to seek stability in nomenclature in the law of priority. From subspecies, however, there is no refuge, except the opinion of experts, which varies with the type of mind of the individual expert.[2]

Mr. Ridgway in the preface to the first part of his 'Birds of North and Middle America' says: "No doubt many of the forms which the author has recognized as subspecies in the present work may appear trivial to others, especially those who have not had advantage of the material upon which they are based; but in all cases it has been the author's desire to express exactly the facts as they appear to him in the light of the evidence examined, without any regard whatever to preconceived ideas, either of his own or of others, and without consideration of the inconvenience which may result to those who are inclined to resent innovations, forgetful of the fact that knowledge cannot be complete until all is known."

Dr. Allen in a review of this work remarks:[3] "Yet it is sometimes possible for slight differences to become magnified and their importance over-estimated by long and intense consideration of them — in other words, there is danger of losing one's poise of

[1] Bull. No. 9, U. S. Dept. Agric., Div. Biol. Surv., p. 20.

[2] The case is aggravated when the attempt is made to create species from extremes of geographic variation.

[3] The Auk, Vol. XIX, p. 102.

judgment in dwelling upon minute details, which tend thereby to assume exaggerated importance."

Dr. Gill reviews the subspecies question as follows:[1] "There is a serious taxonomic problem that will confront us in the treatment of North American birds. Our ornithologists very generally have manifested a disposition to study the variations of species and to discriminate the variants as subspecies. There is a tendency in the same direction in other branches of zoology and by some it has been called the statistical method. It has been very recently employed in ichthyology. For example, Mr. Walter Garstang, of Plymouth, appears to have shown that there is an average of minor characteristics which differentiate the mackerels of different ranges as distinct races, but he has not deemed it necessary to name such races. Such studies are valuable and should not be decried. Nevertheless an instability is introduced in any group in which undue prominence is given to such variations which is embarrassing. I do not see any end to such splitting, but an interminable number of subspecies looms threatening in the future. I would suggest that in the new ornithology a very subordinate rank should be given to the subspecies. The species might be described in generalized terms, that is, including all the variants, and the diversification into subspecies indicated in terse phraseology immediately after the diagnosis of the common characters."

Better still, if we treat geographic variation not as subspecies, but as we treat variation in sex, age, season, etc. By pursuing this course we have a stable criterion. It may be rather trying at the outset, arousing in us feelings akin to superstition, to call all Song Sparrows *Melospiza cinerea*; nevertheless the geographic variations ignored[2] are not greater than the sexual variation in Williamson's Sapsucker and the seasonal variation in the Marbled Murrelet, once of sufficient import for generic and specific distinction.

The question is not whether we affirm or deny the existence of

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[1] The Osprey, Vol. III, p. 92.

[2] The variation in size in the Song Sparrow is insignificant compared with the variation in size exhibited in the Canada Goose.

subspecies; the question is whether a bird name should be an attempt to express the facts and theories of evolution, or whether a bird name should be a convenient handle to forms exhibiting no intergradation, the species of to-day. In trying to manufacture a nomenclature for birds of remote ages, past and future, are we not putting an impediment in the way of the study of existing birds?

What then shall we call the Mocking Bird of the writer of the old tract on Carolina, the *Turdus minor cinereo-albus non maculatus* of Catesby, the *Turdus polyglottos* of Linnæus, the *Mimus polyglottus* of Boie, the *Mimus polyglottus*, var. *caudatus* of Coues, the *Mimus polyglottos polyglottos*, *Mimus polyglottos leucopterus* of Mearns? Call them all *Mimus polyglottos*, giving in the general description of the species geographic variation along with the other variations.[1]

THE CALIFORNIA MEETING OF THE AMERICAN ORNITHOLOGISTS' UNION.

BY J. A. ALLEN.

In the April number of 'The Auk' (XX, pp. 245, 246) reference was made to a proposed special meeting of the A. O. U. to be held in California some time in May of the present year. Details were given of the itinerary for the outward trip and of the probable cost of transportation for the round trip. The proposition met with such cordial approval that two Pullman cars were required for the accommodation of the members and their friends who desired to avail themselves of so favorable an opportunity to visit the Pacific coast. Chicago was the point of rendezvous for the depar-

[1] Since the above was written, I have read Dr. Allen's observations on 'Species, Varieties, and Geographical Races' in the 'Mammals and Winter Birds of East Florida' (Bull. Mus. Comp. Zoöl., Vol. II. no. 3, April, 1871. pp. 242–249). So far have we drifted, that the republication of these observations, written more than thirty years ago, would be a timely elucidation of the present questions in ornithological nomenclature.